

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHAN C. TALSTRA, JOHAN P. M. G. LINNARTZ,
and TREVOR G. R. HALL

Appeal 2007-0979
Application 09/548,727
Technology Center 2100

Decided: June 7, 2007

Before LEE E. BARRETT, JAY P. LUCAS, and JOHN A. JEFFERY,
Administrative Patent Judges.

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 1-4 and 6-21. Claim 5 has been indicated as containing allowable subject matter (Answer 9). We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Appellants invented a method of copy protection of information stored on an information carrying medium that is read from a reading device and transmitted to an application device for playback and/or recording. Specifically, the reading device derives a first characteristic of the content of information, and the application device derives a second characteristic of the information. Verifying units in both the reading device and application device compare the respective information characteristics to ensure that information received by the application device matches the information sent to the application device. Playback and/or recording are controlled depending on this comparison. Claim 7 is illustrative:

7. A method of exchanging copy protection information regarding a content of information contained on an information carrying medium between a reading device and an application device, wherein the copy protection information comprises:

deriving, by the reading device, of a first characteristic of the content of information;

transmitting the content of information from the reading device;
and

receiving a second characteristic of the content of information from the application device, after the transmission by the reading device, the second characteristic being received by the reading device, wherein the characteristics are verified by comparison and wherein the result of the comparison is used to stop the transmission, playback and/or recording of information in case of a mismatch of the characteristics.

The Examiner relies on the following prior art references to show unpatentability:

Linnartz	WO 99/11064 A2	Mar. 4, 1999
Cox	US 5,915,027	Jun. 22, 1999
		(filed Nov. 5, 1996)

The Examiner's rejections are as follows:

1. Claims 7, 8, and 12-21¹ are rejected under 35 U.S.C. § 102(b) as being anticipated by Linnartz.
2. Claims 1-4, 6, and 9-11 are rejected under 35 U.S.C. § 103(a) as unpatentable over Linnartz in view of Cox.

Rather than repeat the arguments of Appellants or the Examiner, we refer to the Briefs and the Answer for their respective details. In this decision, we have considered only those arguments actually made by Appellants. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

OPINION

It is our view, after consideration of the record before us, that the disclosure of Linnartz fully meets the invention set forth in claims 7, 8, and 12-21. We also conclude that the evidence relied upon and the level of skill

¹ Although the Examiner omitted claims 17 and 18 in the statement of the rejection on Page 3 of the Answer, these claims were nevertheless included in the discussion of the rejection. *See* Answer 6-7; *see also* Br. 11; Reply Br. 2 (including claims 17 and 18 in the arguments pertaining to the anticipation rejection). We therefore presume that the Examiner's omission of claims 17 and 18 in the grouping on Page 3 of the Answer was an inadvertent typographical error and the Examiner intended to include claims 17 and 18 in this rejection statement.

in the particular art would have suggested to one of ordinary skill in the art the invention set forth in claims 1-4, 6, and 9-11. Accordingly, we affirm.

The Anticipation Rejection

We first consider the Examiner's rejection of claims 7, 8, and 12-21 under 35 U.S.C. § 102(b) as being anticipated by Linnartz. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. *RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984); *W.L. Gore and Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983).

The Examiner has indicated how the claimed invention is deemed to be fully met by the disclosure of Linnartz (Answer 3-7). Regarding claim 7, Appellants argue that Linnartz does not disclose or suggest "deriving" a first characteristic of the content of the information as claimed. In this regard, Appellants emphasize that the term "deriving" as claimed is clearly defined by the Specification with a meaning that is different than the term's ordinary and customary meaning (Reply Br. 2-3). Appellants also contend that deriving a first characteristic relates to summaries of selected parts of the information. According to Appellants, the term "characteristics" as claimed is synonymous with "summaries" in light of the Specification. Appellants further contend that the first characteristic as claimed is derived from the content, unlike the hash values in Linnartz which are selected at random (Br. 13-14; Reply Br. 2-3).

The Examiner argues that Appellants' arguments are not commensurate with the scope of the claim. The Examiner emphasizes that giving the term "derived" its broadest reasonable interpretation, the watermarks in Linnartz are derived from the physical watermark on the record carrier. The Examiner also notes the decoder derives the watermark which is returned to the drive 52 for comparison to control the switch 54 (Answer 10-11).

We will sustain the Examiner's rejection of claim 7. At the outset, we disagree with Appellants' assertion that the term "derived" must be given a meaning other than its ordinary and customary meaning. Although Appellants point to several passages within the Specification to support their argument, we find these passages merely describe a preferred embodiment of the claimed invention. Significantly, these passages hardly ascribe a special definition for the term "derived" that would foreclose interpreting the term with its plain meaning. *See Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298, 67 USPQ2d 1132, 1136 (Fed. Cir. 2003) ("In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art."). *See also Phillips v. AWH Corp.*, 415 F.3d 1303, 1312, 75 USPQ2d 1321, 1326 (Fed. Cir. 2005) (en banc).

To determine the ordinary meaning of commonly understood words, it is entirely appropriate to cite a dictionary definition. *Agfa Corp. v. Creo Products, Inc.*, 451 F.3d 1366, 1376, 79 USPQ2d 1385, 1392 (Fed. Cir. 2006) (noting that general purpose dictionaries may be helpful when claim construction involves "little more than the application of widely accepted

meaning of commonly understood words”). In our view, the Examiner’s interpretation of “derived” based on dictionary definitions on Page 10 of the Answer is reasonable. We therefore adopt the Examiner’s construction of “derived.”

Furthermore, we will also interpret the term “characteristic” as claimed with its ordinary and customary meaning. Although Appellants argue that the term “characteristics” is synonymous with “summaries” in light of the Specification,² such an argument is tantamount to importing limitations from the Specification into the claims. Such a practice, however, has been repeatedly denounced by the Court of Appeals for the Federal Circuit. *See Phillips v. AWH Corp.*, 415 F.3d at 1323, 75 USPQ2d at 1334 (Fed. Cir. 2005) (“[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments . . . [C]laims may embrace ‘different subject matter than is illustrated in the specific embodiments in the specification.’”) (citations and internal quotation marks omitted).

Moreover, the claim language itself suggests that Appellants envisioned a broader interpretation for the term “characteristics.” For example, dependent claims 2 and 3 specify that summaries are used as characteristics. Independent claim 1, however, contains no such limitation. It is well settled that “the presence of a dependent claim that adds a particular limitation raises a presumption that the limitation in question is not found in the independent claim.” *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 806, 82 USPQ2d 1481, 1485 (Fed. Cir. 2007). Under the doctrine of claim differentiation, we therefore presume that the term

² See Br. 14.

“characteristics” is not limited to summaries as Appellants argue, but rather is interpreted more broadly. To do otherwise would render at least claim 2 identical in scope to claim 1 and therefore superfluous. *See id.*

With this interpretation, we turn to Linnartz. Linnartz teaches a system for copy-protecting video content information comprising drive 52 that plays a record carrier 51 carrying a physical mark and video content containing a watermark. Video content is directed to decoder 57 that detects and extracts the watermark information. The decoder then communicates the retrieved watermark information (and possibly supplemental information carried by the watermark) back to the drive via link 56. The playback device then checks the watermark information against further supplemental information, such as a physical mark on the record carrier or the control signal, to control switch 54 (Linnartz, Abstract; p. 9, line 16 – p. 10, line 25; Fig. 5).

We agree with the Examiner that the reading device in Linnartz “derives” a first characteristic of the content of information as claimed. As noted in the abstract, the playback device checks the watermark information sent by the decoder against “further supplemental *information*, such as a physical mark on the record carrier or the control signal” (Linnartz, Abstract; emphasis added).

The physical mark on the disc that is detected by the reading device certainly represents information related to the watermark -- information that is included along with the other content on the disc (i.e., copyright information). *See* Linnartz, page 9, lines 19-22 (noting that the reading means comprises a control unit that detects the physical mark P and controls switch 54 to block the output dependent upon the copyright information);

see also Linnartz, page 6, lines 16-17 (allowing playback if the physical mark “agrees with” the watermark in the content); Linnartz, page 9, line 34 – page 10, line 2 (noting that recording or playback of content lacking PTY-marks must be prevented unless the drive can compare a pixel-domain watermark with a physical mark or ticket on the disc).

The clear import of this discussion is that the physical mark P is at least associated with information that is detected by the reading device and ultimately compared to watermark information received from the decoder to control playback. To this end, the information associated with the physical mark is inherently transmitted to the comparator for comparison. The reading device’s detection and processing of information associated with the physical mark – value-added information that is provided along with the other content on the disc – fully meets deriving a first characteristic of the content of information by the reading device as claimed giving the terms “deriving” and “characteristic” their broadest reasonable interpretation. In addition, decoder 57 certainly derives watermark information from the content (i.e., a second characteristic of the content of information) that is compared with the derived first “characteristic” noted above.

For at least these reasons, we will sustain the Examiner’s rejection of claim 7. Since our discussion above applies equally to claims 8, 12-19, and 21, we will likewise sustain the Examiner’s rejection of those claims for

similar reasons. Regarding claims 14-16³, we add that the derived first characteristic in Linnartz (i.e., information associated with the physical mark) is transmitted at least to the control unit for comparing with the received second characteristic (derived by the decoder from a received second portion of a second information signal) to control playback. Regarding claim 20, we agree with the Examiner that Linnartz' encryption feature fully meets the claimed encryption limitation.

We also agree with the Examiner that the fourth and fifth embodiments of Linnartz that involve hashing fully meet the claims. In one embodiment, the drive hashes, adds a random number, and signs the MPEG stream using cryptographic algorithms. The decoder then verifies the signature, detects the watermark, and sends a message back to the drive containing the retrieved watermark bits concatenated to the random number and signature (Linnartz, p. 11, ll. 20-27).

In another embodiment, Linnartz computes several hash values *over the MPEG content* by concatenating a particular predetermined string to the content. The MPEG content and the hash values are stored on the disc in encrypted form. The drive passes the MPEG to the decoder, but not the hash value. The decoder then returns the watermark, appropriate hash value, and signs the message. The drive then compares decoded versions of the hash functions to control playback (Linnartz, p. 11, l. 31 – p. 12, l. 17; Fig. 6).

³ We note in passing that an apparent typographical error exists in claim 16. In line 3, “red” should be changed to “read.” Because the parties did not raise this issue on appeal, it is not before us. In an *ex parte* appeal, the Board is basically a board of review. That is, we review rejections made by patent examiners. *Ex parte Gambogi*, 62 USPQ2d 1209, 1211 (B.P.A.I. 2001). Accordingly, we leave resolution of this issue to the Examiner and the Appellants.

Significantly, because the hash values are computed over the MPEG content and concatenated to the content, the disc's content effectively includes the MPEG portion and the portion comprising the hash values. In performing the comparison noted above, the drive inherently "derives" a first characteristic of the content stored on the disc (i.e., decoded hash version) for comparing with the derived second characteristic. Appellants argue that the hashes, random numbers, and signatures are in addition to the content and not related to the content (Reply Br. 5). We note, however, that the "content" in these embodiments of Linnartz effectively includes *both* the MPEG portion *and* the other value-added portions (hashes, random numbers, signatures) giving the term "content" its broadest reasonable interpretation. In short, nothing in the claims precludes the "content of information" as claimed to comprise the MPEG portion and other value-added portions.

For at least these reasons, we will sustain the Examiner's rejection of claims 7, 8, and 12-21.

The Obviousness Rejection

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). Furthermore, "'there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness' [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of

ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)).

If the Examiner’s burden is met, the burden then shifts to the Appellants to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

Regarding independent claim 10, the Examiner's rejection essentially finds that Linnartz teaches every claimed feature except for the application unit to continuously report a characteristic of the received content to the reading device. The Examiner cites Cox as teaching periodically watermarking material and the desirability of protecting every frame. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to watermark periodically or even every frame in Linnartz to enhance content protection. Regarding claims 1-4, 6, 9, and 11, the Examiner adds that continuous reporting as claimed would have been obvious in view of the teachings of Cox. The Examiner further notes that summaries are generated as claimed in view of Linnartz’ teaching of the decoder returning a watermark and appropriate signatures (Answer 8-9).

Regarding independent claim 1, Appellants essentially reiterate the arguments regarding the failure of the cited prior art⁴ to disclose or suggest deriving first and second characteristics from content contained on the information carrying medium and comparing the characteristics for a match as claimed (Br. 24-25; Reply Br. 6). We find Linnartz amply discloses these limitations for the reasons previously discussed.⁵ Since Appellants have not persuasively rebutted the Examiner's position, the Examiner's rejection of claim 1 is therefore sustained. Since Appellants have not separately argued the patentability of dependent claim 6, it falls with independent claim 1. *See*

⁴ Initially, Appellants treated the Examiner's rejection based solely on Linnartz since it was unclear to Appellants why the Examiner's rejection included the Cox disclosure. According to Appellants, "[n]one of the previous office actions refer[red] to *any* of the subject matter within Cox" (Br. 23-24; emphasis added). The Examiner responded by noting two non-final office actions that relied upon the disclosure of Cox: (1) a non-final rejection dated Sept. 22, 2004 (including Cox in a discussion pertaining to claim 10), and (2) a non-final rejection dated June 16, 2005 that incorporated the Sept. 2004 discussion by reference and added discussion pertaining to claims 1-4, 6, 9, and 11 (Answer 17-18). In response, Appellants countered that the appealed claims were amended since the Examiner's analysis of Cox, but no further analysis has been provided.

In any event, we find that the Examiner relied on Cox in three office actions: the two office actions noted by the Examiner above and the final rejection dated Nov. 3, 2005 (incorporating the previous non-final rejection). In essence, the Examiner used two successive incorporations by reference in the final rejection to incorporate the rejection based on the combined teachings of Linnartz and Cox. Notwithstanding this somewhat unorthodox approach, the Examiner's rejection based on the combined teachings of Linnartz and Cox was nonetheless effectively incorporated in full in the final rejection.

⁵ *See* pages 7-8, *supra*, of this opinion.

In re Nielson, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987);
see also 37 C.F.R. § 41.37(c)(1)(vii).

Regarding claims 2 and 3, we note that Appellants have simply not persuasively rebutted the Examiner's interpretation of "summaries" as corresponding to a subset of information noted on page 19 of the Answer – an interpretation that we find reasonable. Regarding claim 4, Appellants have also not persuasively rebutted the Examiner's position that Linnartz' (1) watermark and secure link, or (2) the hash values – values known only to the player and decoder – correspond to the summarizing selected parts of the information based on a secret shared between the reading and application devices as claimed. The Examiner's rejection is therefore sustained. We will also sustain the Examiner's rejection of claims 9⁶ and 10 for the reasons previously discussed.⁷ As we indicated previously, we find that the information associated with the physical mark is inherently transmitted by the reading device to the comparator for comparison. Appellants have simply not persuasively rebutted the Examiner's prima facie case of obviousness for claims 9 and 10. Accordingly, the Examiner's rejection of these claims is sustained.

DECISION

We have sustained the Examiner's rejections with respect to all claims on appeal. Therefore, the Examiner's decision rejecting claims 1-4 and 6-21 is affirmed.

⁶ An apparent typographical error exists in line 7 of claim 9: the term "of derived" should be changed to "derived."

⁷ See pages 7-10, *supra*, of this opinion.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

tdl/gw

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